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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,460	09/27/2001	George D. Davis	H0001553	5270

128 7590 01/22/2003

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EXAMINER

VORTMAN, ANATOLY

ART UNIT PAPER NUMBER

2835

DATE MAILED: 01/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/966,460

Applicant(s)

DAVIS ET AL.

Examiner

Anatoly Vortman

Art Unit

2835

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 17-27 is/are rejected.
- 7) ☒ Claim(s) 13-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 18 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Recitation of claim 18 "the electrically resistive element is coupled between the first terminal and the second terminal" contradicts with the recitation of parent claim 17 which states that "an electrically resistive element coupled between the first terminal and an other terminal".

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 27 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Claim 27 recites limitations "said structure" and "a point of said detecting step". There is insufficient antecedent basis for these limitations in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-6, 17, 19-26, are rejected under 35 U.S.C. 102(b) as being anticipated by US/4,306,210 to Saur.

Regarding claim 1, Saur disclosed (Fig. 3) a snap-action thermal switch structured in a normally open configuration; and a resistance element (PTC resistor (31), column 3, line 45) integral with the snap-action thermal switch and coupled to an output thereof.

Regarding claim 2, Saur disclosed that the resistance element (31) and the snap-action thermal switch share one or more common terminals (1).

Regarding claims 3 and 4, Saur disclosed that the snap-action thermal switch is structured having a pair of terminals (1, 9"; 1,9"; or 9',9") being mutually electrically isolated when the snap-action thermal switch structured in the normally open configuration; and the integral resistance element (31) is electrically coupled to provide an output on the pair of electrically isolated terminals (1, 9"), wherein the pair of electrically isolated terminals is shorted together when the device senses an ambient temperature higher than a predetermined set point of the snap-action thermal switch (Fig. 3).

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Regarding claims 5 and 6, Saur disclosed that said integral resistance (31) is mounted on an interior surface of the snap-action thermal switch (Fig. 3) or on an exterior surface of said switch (column 4, line 45).

Regarding claims 17, 19, and 20, Saur disclosed (Fig. 3) a three-terminal, snap-action thermal switch, comprising: mutually spaced apart and electrically isolated first (9'), second (1) and third (9'') electrical terminals mounted in a header (8); a fixed electrical contact (16) being positioned on the first terminal (9'); a movable electrical contact (27) being positioned on the second terminal (1) and being biased into electrical contact with the fixed electrical contact (16); a bimetallic actuator (26) being convertible as a function of temperature between a first state wherein an actuation portion is positioned to space the movable electrical contact (27) away from the fixed electrical contact (16) and a second state wherein the actuation portion is positioned to permit electrical contact between the movable electrical contact (27) and the fixed electrical contact (16); and an electrically resistive element (PTC resistor (31), column 3, line 45) coupled between the third electrical terminal (9'') and the second (1) electrical terminal.

Regarding claims 21 and 22, Saur disclosed a housing (1) coupled to the header (8) and cooperating with the header (8) to encase the resistive element (31), the fixed (16), and movable (27) contacts.

Regarding claim 23, Saur disclosed that said resistive element (31) is external to the cooperating housing (1) and header (8), (column 4, line 45).

Regarding claims 24-26, the method steps recited in the claims are inherently necessitated by the device structure as disclosed by Saur.

7. Claims 7 and 8, are rejected under 35 U.S.C. 102(b) as being anticipated by US/5,337,036 to Kuczynski.

Regarding claims 7 and 8, Kuczynski disclosed a thermal sensor (Fig. 9 and 24), comprising: a single pole, single-throw switch having first (18, 19) and second (12) electrical contacts structured in a normally open configuration (column 7, lines 1+), the first contact (18) being movable relative to the second contact (12); a bimetallic actuator (22) having first and second physical states and positioned relative to the first electrical contact (18,19) and responsive to a sensed temperature for spacing the first movable contact (18, 19) away from the second contact (12) while changing said first and second physical states; and an electrical resistor (210a) coupled between the first and second contacts.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuczynski ('036).

Regarding claims 9-12, Kuczynski disclosed all of the claims limitations as apply to claim 8, but did not disclose a plurality of snap-action thermal switches.

It would have been obvious to one having ordinary skill in the thermal switch art at the time the invention was made to provide any desirable quantity of identical thermal switches in the device in order to accommodate said device for particular application, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Allowable Subject Matter

10. Claims 13-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter:
claims 13 and 14 recite "a means for determining" and claim 15 recites "a logic circuit".

The aforementioned recitations in combination with remaining limitations of claims 13-15, are believed to render the subject matter of said claims 13-15 and of the dependent claim 16 patentable over the art of record.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure:

US/5607610, 5615072, 4849729, 5023744, 6020807, 3840834, 5048974, 5892429, 5757261, 5973587, 5627506, JP/63-314734 and EP/0564150 disclosed thermally responsive switches with resistive elements.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anatoly Vortman whose telephone number is 703-308-7824. The examiner can normally be reached on 9:30-6:00, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Darren Schuberg can be reached on 703-308-4815. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3431 for regular communications and 703-305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.

Anatoly Vortman
Primary Examiner
Art Unit 2835

A.V.
November 14, 2002

A handwritten signature in black ink, appearing to read 'A. Vortman', with a long horizontal flourish extending to the right.